

SNOWMASS MICROHYDROELECTRIC PLANT

CLEAN ENERGY

CLEAN AIR

Welcome to the SNOWMASS MICROHYDROELECTRIC PLANT. Powered by West Brush Creek, the turbine inside this building generates enough clean, renewable electricity to power 40 average homes.

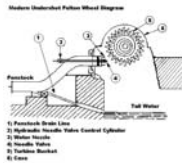
ASPEN SNOWMASS
ASPEN SKIING COMPANY

PHOTO: Vance Howard

HOW DOES IT WORK?

In the spring, snowmelt floods West Brush Creek. Some of that water is diverted into the Sheer Bliss reservoir, 800 vertical feet from here. The water then runs through a 4,000 foot underground pipe to this building, reaching a pressure of 323 pounds per square inch.

The high-pressure water spins a turbine that drives an electrical generator. The water empties into the adjacent pond before channeling under Fanny Hill back into the creek. Renewable energy flows from this building into the electricity grid, to be used by people like you.



Source: Renewable, 19 (1986)



The Canyon Industries single nozzle Pelton turbine is at the heart of the Snowmass microhydroelectric plant.



A thrust block where the high pressure water pipe enters the powerhouse absorbs energy and prevents damage to walls and equipment.



ENVIRONMENTAL BENEFIT

The hydro plant generates most of its power from May through August during spring runoff. Because running water, not coal, is used to create this electricity, there is no associated pollution. The power plant creates between 200,000 and 300,000 kilowatt-hours of electricity annually. A coal-fired power plant generating the same amount of electricity would emit half a million pounds of carbon dioxide, the primary cause of global warming, as well as other pollutants that cause smog and acid rain. Unlike dams, which drastically change the waterways in which they are installed, micro hydro systems only divert a small amount of water, resulting in limited impact to the stream.



Highlighted hydro route on the Snowmass trailmap.



THANKS TO THE MANY ENTITIES THAT MADE THIS PROJECT POSSIBLE THROUGH FINANCIAL SUPPORT!

CANYON INDUSTRIES

Canyon Hydro produces highly efficient, reliable turbine systems for generating hydroelectricity. We manufacture a wide range of small hydro systems up to 15 megawatts, and provide custom design and machining for new or replacement turbine components. With 28 years in business, we know hydro power. Canyon Hydro systems are currently in operation worldwide, operating both stand-alone and interfaced with the utility grid. Our commercial systems are customer designed and fabricated to customer specifications. Canyon residential systems provide power from small streams, typically up to about 100 kW.
<http://canyonindustriesinc.com>

CORE

The Community Office for Resource Efficiency is a nonprofit organization that promotes renewable energy and energy efficiency in western Colorado and beyond. CORE focuses its work on the Roaring Fork Valley, working on energy, transportation, and sustainable architecture to help create a more sustainable future. www.aspencore.org

Governor's Office of Energy Management and Conservation

The Governor's Office of Energy Management and Conservation is Colorado's lead state agency on energy efficiency issues. OEMC has grown from an agency created to respond to the energy crisis of the 1970s to one that now supports cost-effective programs, grants and partnerships that benefit Colorado's economic and natural environment. OEMC's programs touch virtually every citizen of Colorado in meaningful ways. www.state.co.us/oemc

HOLY CROSS ENERGY

Holy Cross is a not-for-profit, cooperative corporation with more than 50,000 customers served by 150 employees. It is proud to provide energy and services to major ski resorts located in the Aspen and Vail areas as well as farms, ranches and friendly rural communities that provide people and resources for the tourist and outdoor recreation industries. www.holycross.com

REMP

In 2000, Aspen and Pitkin County launched the Renewable Energy Mitigation Program (REMP). Designed to promote renewable energy and energy efficiency, REMP is the first program of its kind in the world. By requiring new homes to mitigate their environmental impacts, REMP has raised \$2 million for energy efficiency and renewable energy projects.

THE RUTH H. BROWN FOUNDATION

The foundation focuses on protection of critical land and wildlife resources, public education programs that promote awareness of environmental issues and energy conservation.

THE TOWN OF SNOWMASS VILLAGE

The Town of Snowmass Village supports strong leadership in environmental stewardship, as our Village's very future depends on it. As our aspiration indicates, "When successful, Snowmass Village will have achieved the quality of life...that will assure our future as a sustainable resort community." www.townofsn.com

SIIEPP

The Strategic Environmental Project Pipeline (SIIEPP) Foundation is a non-profit organization that has developed a national database of Supplemental Environmental Project ideas that fall under the broad categories of clean-energy, energy efficiency and pollution prevention. The SIIEPP Foundation is dedicated to helping organizations realize their vision of a clean and safe environment by nationally matching projects with funders. The SIIEPP Foundation supports energy efficiency, clean energy and pollution prevention projects implemented at the local, state and national levels for the benefit of the public. www.sieppfoundation.org

